

NOTES ON TEMPLETONIA R.Br. (PAPILIONACEAE)

by

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ABSTRACT

The identity of *Templetonia regina* J. Drummond is discussed and the species is relegated to synonymy under *Brachysema aphyllum* Hook. *Templetonia neglecta* J. H. Ross sp. nov. is described from Western Australia.

TAXONOMY

The name *T. regina*, which does not appear in Index Kewensis and which has been overlooked since it was published, appears in extracts of one of Drummond's letters (dated 3 Oct. 1844) published by W. J. Hooker in *J. Bot. & Kew Gard. Misc.* 5: 312 (1853). The very brief description supplied by Hooker is as follows:

"For about seventy-five miles from the Moore River, we proceeded nearly due north over a rich grassy country, which exhibited little novelty, but was gay with the flowers of my *Lawrencella lanceolata*, one of the loveliest of plants . . . On the summit of a low bushy hill we discovered a charming Leguminous shrub, 3 or 4 feet high, and bearing brilliant scarlet flowers, nearly 2 inches long, varying to yellow, and which resemble those of a *Templetonia* more than any Australian genus I know. At present I have called it *T. regina*, for it is truly the queen of *Leguminosae*. Its seed-vessels are like those of *Jacksonia*."

Hooker edited Drummond's letters fairly severely and omitted from the description some relevant information which further assists to identify *T. regina*. Drummond's actual letter, which is housed in the archives of the Herbarium of the Royal Botanic Gardens, Kew, reads as follows:

". . . on the top of a low bushy hill, in this grassy country we found a most beautiful leguminous shrub, growing 3 or 4 feet high with the stems of *Platylobium scolopendrium*, but with flowers nearly two inches long and of the most brilliant scarlet varying to yellow, they the flowers bear a greater resemblance to *Templetonia* than any other Australian genus I am acquainted with and although the seed vessels will no doubt supply generic distinction I for the present name the plant *T. regina* allied to the splendid plant, which may well be called the queen of Western Australian Leguminosae, at least in the form of the corolla, but with the seed vessels and other characters of *Jacksonia*, . . ."

"For the present . . ." might be considered to imply that Drummond was not definitely accepting the name but he did not actually say so. However, it is clear from Drummond's letter of 3 Oct. 1844 and from the following passage in a letter to W. J. Hooker dated 2 July 1847 that while Drummond accepted the plant as a new species for which he adopted the specific epithet "regina", he was initially unsure to which genus it belonged and subsequently changed his mind. Drummond wrote:

". . . I sent home in the collection of specimens nos. 26 & 37 two beautiful scarlet flowered leguminous plants I believe both new genera, I sent you both these plants in the last box no. 37 is the plant I called in my letter *Templetonia regina*, but the habit of the plant, as well as the seed vessel is quite different from *Templetonia*, and I wish to call it *mackayii regina*, in compliment to our mutual friend J. T. Mackay of the College Botanic Garden Dublin, when I lived in

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Ireland Mr Mackay's house was a home to me when I happened to be in Dublin, and my late Brother was under many obligations to him, it would give me great pleasure to have a fine plant of my discovering bear his name, it will also associated among our Western Australian leguminosae, with Scot & Templeton who were both friends of his own, and fellow labourers in the same field . . . "

However, Hooker did not accede to Drummond's request as there is no mention of the name *Mackayia regina* in any extracts of Drummond's letters published subsequently. The reason for this is not known but perhaps it was because Hooker was aware of the already published genera *Mackaia* S. F. Gray (1821) and *Mackaya* Arn. (1838) or perhaps he merely overlooked the request when extracts of Drummond's letters were published in 1853.

Drummond's letters of 3 Oct. 1844 and 2 July 1847 provide additional clues to the identity of *T. regina* which is fortunate in view of the brief description published by Hooker. Reference was made in Drummond's letter of 2 July 1847 to his no. 37 being the plant he called *T. regina*. Drummond 4th coll. no. 37 was cited by Benth., 'Fl. Austr.' 2: 12 (1864), as *Brachysema aphyllum* Hook., Curtis's Bot. Mag. t. 4481 (1849), and there are two specimens of Drummond's 4th coll. no. 37 in the Herbarium of the Royal Botanic Gardens, Kew, named *B. aphyllum* and three in the National Herbarium of Victoria. The plate (t. 4481) of *B. aphyllum* accords with Drummond's description and it is clear that *T. regina* is a later name for the plant described as *B. aphyllum*. Dr M. D. Crisp, Herbarium, National Botanic Gardens, Canberra, who is currently revising the genera *Brachysema* R. Br. and *Leptosema* Benth., has informed me that *B. aphyllum* is sufficiently distinct to be separated at generic level and that he intends to transfer the species to *Burgesia* F. Muell. However, as the required new combination in *Burgesia* has not yet been published for the species, *T. regina* is here reduced to synonymy under *Brachysema aphyllum* pending the publication of the new combination:

***Brachysema aphyllum* Hook., Curtis's Bot. Mag. t. 4481 (1849).**

Templetonia regina J. Drummond, *J. Bot. & Kew Gard. Misc.* 5: 312 (1853), *synon. nov.* Type: Western Australia, \pm 120 km from Moore River, J. Drummond 4th coll. no. 37 (K, MEL).

***Templetonia neglecta* J. H. Ross, sp. nov., affinis incertae; ab omnibus speciebus differt.**

Frutex usque ad 0.9 m altus, glabra, inermis. Folia simplicia; lamina (0.45) 0.7-2.2 (3.8) cm longa, 0.2-0.5(0.7) cm lata, oblonga vel plus minusve obovata-oblonga, apice apiculata, glabra, costa subtus satis obvia. Stipulae inconspicuae. Flores axillares, solitarii; pedicelli usque ad 0.7 cm longi; bractae ad basim pedicellorum usque ad 0.5 mm longae; bracteolae usque ad 1.3 mm longae. Calyx usque ad 6 mm longus. Corolla luteola: vexillum suborbiculare, 9.5-15 mm longum, 7.5-12.5 mm latum; carina et alae usque ad 12 mm longae, unguiculatae. Stamina 10; filamenta in columnam antice fissam connata. Ovarium usque ad 6 mm longum, glabrum. Legumina oblonga, 2.2-2.6 cm longa, 0.9-1.1 cm lata, glabra. Semina elliptica, 4.5-5.8 mm longa, 2.6-3.2 mm lata.

Glabrous shrub up to 0.9 m high with several stems arising from a woody rootstock; *young stems* green, \pm terete or distinctly ridged and somewhat angular, unarmed. Stipules inconspicuous, up to 1 mm long, broad basally and tapering apically. *Leaves* simple, articulated basally, oblong to slightly obovate-oblong, upper surface usually somewhat concave in section, (0.45) 0.7-2.2 (3.8) \times 0.2-0.5 (0.7) cm, glabrous, midrib raised and conspicuous beneath, projecting slightly beyond the apex of the leaf as a short mucro, with a mass of fine glandular processes in the axils. *Flowers* 1 per axil, on glabrous pedicels 4-7 mm long, the pedicels with a basal bract \pm 0.5 mm long and a pair of glabrous bracteoles 1-1.5 mm long from about the middle to near the apex. *Calyx* green, up to 6 mm long, the two upper lobes fused for almost their entire length, the lowest lobe longest, glabrous except for a fringe of hairs on the apex of the lobes. *Standard* orbicular, 9.5-15 mm long including a claw up to 3.5 mm long, 7.5-12.5 mm wide, reflexed, emarginate apically,

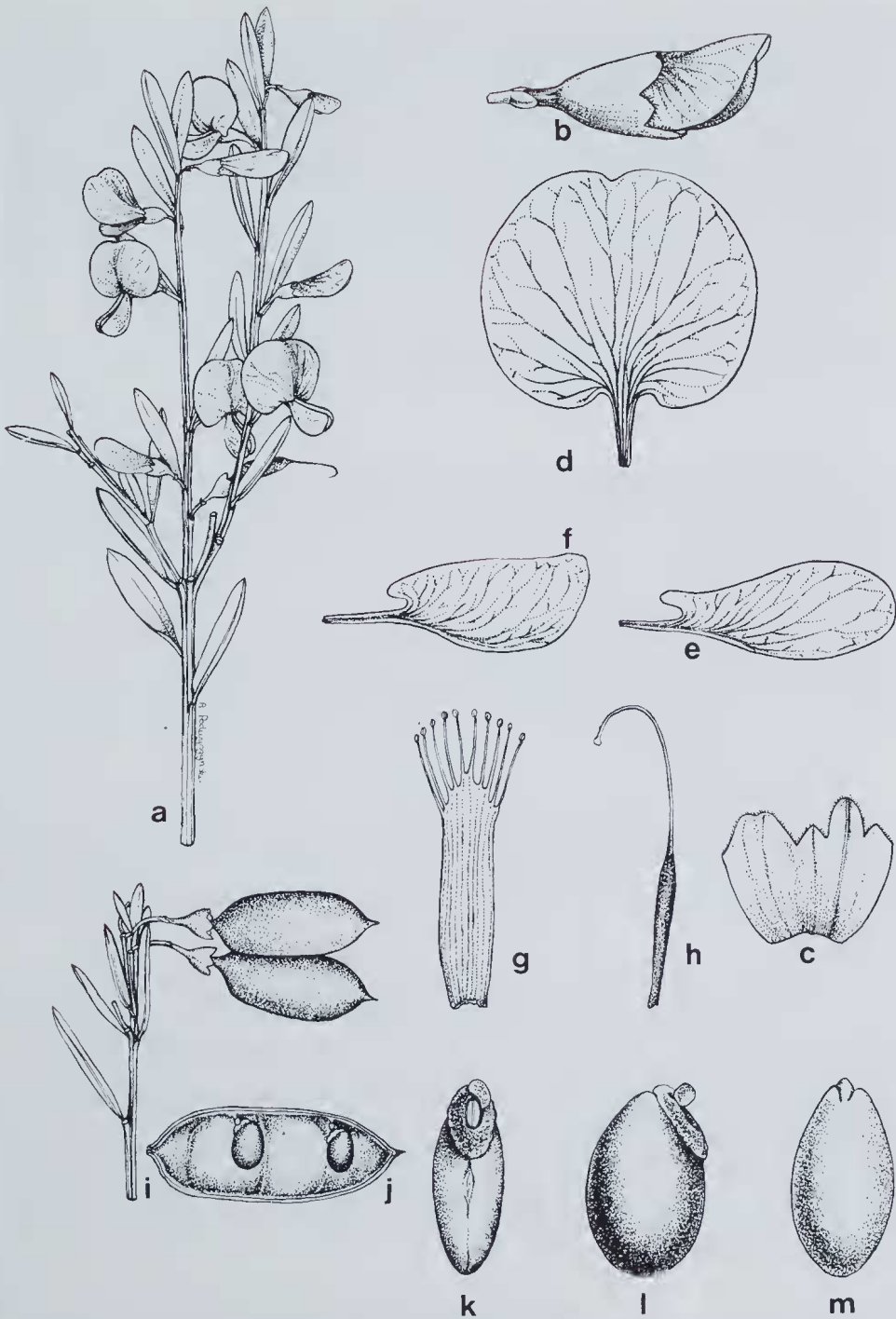


Fig. 1. *Templetonia neglecta*. a—flowering twig, x 1; b—side view of flower showing the paired bracteoles, x 3; c—calyx opened out (upper lobes on left), x 3; d—standard, x 3; e—wing petal, x 3; f—keel petal, x 3; g—staminal tube opened out, x 3; h—gynoeceium, x 3; a-h from Newbey 4273 (PERTH); i—fruiting twig, x 1; j—valve of pod showing seeds, x 1½, i & j from Newbey 2775 (PERTH); k—seed, hilar view, x 5; l—seed, side view, x 5; m—outline of embryo showing straight radicle, x 5, k-m from A. S. George 7236 (PERTH).

dull lightish brown outside with dull yellow venation, dull yellow inside with a darker yellow basal horse-shoe shaped throat surrounded by a narrow dull light brown margin (fide Newbey 4273); *wings* 8.5-12 mm long including a claw up to 2.5 mm long, 2.5-4.5 mm wide, auricled, dull light brown outside; *keel* petals lightly united, 9-12 mm long including a claw up to 3.5 mm long, 3.5-4.8 mm wide, auricled, dull light brown outside. *Stamens* 10.5-12.5 mm long, the filaments joined in a sheath split open on the upper side, anthers alternately basifixed and dorsifixed. *Ovary* up to 6 mm long including the stipe, 4-6-ovulate, glabrous; style slender, curved, with a small terminal stigma. *Pod* oblong, on a stipe as long as or just exceeding the persistent calyx, 2.2-2.6 × 0.9-1.1 cm, with an acute apical beak, 3-5-seeded, valves convex, coriaceous, glabrous, splitting along both sutures. *Seeds* elliptic, 4.5-5.8 × 2.6-3.2 mm and 1.5-2.1 mm thick, yellowish-brown, with a small hilum surrounded by a collar-like aril, the aril with a raised lateral lip.

TYPE COLLECTION: Western Australia, 11 km N.W. of Black Head, 34°31'S, 118°48'E, *K. Newbey* 4273, 6.viii.1974 (PERTH, holo.!).

ALSO EXAMINED:

Western Australia—near Cape Arid, *Maxwell*, 1875 (MEL 92091). 28 miles S. of Ravensthorpe, *E. Wittwer* 412, 27.viii.1965 (PERTH). W. end of Eyre Range, S. of Ravensthorpe, *A. S. George* 7236, 2.xi.1965 (PERTH). Eucla Division, Esperance Distr., 3 km N.W. of Young River crossing on Ravensthorpe-Esperance main road, *N. N. Donner* 2774, 25.ix.1968 (AD 97118033). 22 miles S. of Jeramungup, *K. Newbey* 2775, 16.xi.1968 (PERTH). 17 miles W. of Bremer Bay, *K. Newbey* 2843, 22.viii.1969 (PERTH).

T. neglecta is a rare species with a restricted distribution in the Southwestern Botanical Province of Western Australia being confined to the Eyre Botanical District as defined by Beard (1980) where it has been recorded from loam, loamy clay and rocky sand (quartzite). Although the first specimen was collected by Maxwell in 1875, ninety years apparently elapsed before the species was re-collected. Only seven collections of *T. neglecta* have been made to date and further material would be welcomed.

The species lacks any outstanding characteristic which may account for it not having been described previously. According to Mr. K. Newbey plants are inconspicuous, especially when not in flower, and have the appearance of straggly specimens of *Gastrolobium crassifolium* Benth. with only a few leaves. Flowers are produced from early June to early September and individual plants are reported to flower for long periods. Regeneration is mainly by suckering after a fire or earth disturbance.

T. neglecta shows no obvious affinity with any other *Templetonia* species in Western Australia although some sterile small-leaved specimens of *T. retusa* show a fairly close superficial resemblance to sterile specimens of *T. neglecta*. However, *T. retusa* is a very distinctive unrelated species which is readily distinguished from *T. neglecta* when in flower or fruit. *T. neglecta* appears to be most closely related to *T. stenophylla* which occurs in eastern South Australia, Queensland, New South Wales and Victoria and from which it is separated by a large geographical discontinuity. *T. stenophylla* differs in that the plants are sometimes weak-stemmed and straggling, the leaves tend to be larger, not as congested on the stems and of a different shape and texture, the flowers are solitary or paired in the leaf axils, and the pods are usually slightly obliquely oblong-elliptic with a lateral apical beak and on a stipe up to 5 mm long which exceeds the persistent calyx.

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REFERENCE

- Beard, J. S. 1980. A new phytogeographical map of Western Australia. W.A. Herb. Research Notes 3: 37-58.

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